

**COMBAT SERVICE SUPPORT**

Light armor units are usually deployed as platoons task organized to light infantry battalion TFs or in a brigade-size force as a light armor company. The infantry TF does not have the necessary CSS capability to sustain the light armor force, and the light armor platoon cannot sustain itself without help. This presents a unique situation regarding CSS. Limitations due to aircraft availability and the priority of combat systems delivery during initial stages of CONOPS add to the challenge. This chapter first discusses contingency CSS techniques and procedures, then describes CSS for the light armor battalion overall.

CONTENTS		Page
Section I. Light Armor Combat Service Support Fundamentals . . . . .		8-2
Section II. Contingency Combat Service Support Operations . . . . .		8-3
Deployment . . . . .		8-3
Planning Considerations . . . . .		8-3
Phases of Supply . . . . .		8-4
Classes of Supply . . . . .		8-5
Distribution of Supply . . . . .		8-7
Resupply by Air . . . . .		8-7
Maintenance . . . . .		8-8
Techniques for Deploying Light Armor Combat Service Support in the Assault Force. . . . .		8-9
Section III. Operations . . . . .		8-11
Task Force Trains . . . . .		8-11
Combat Trains . . . . .		8-12
Company Trains . . . . .		8-12
Section IV. Supply and Resupply Techniques . . . . .		8-14
Classes of Supply . . . . .		8-14
Supply Procedures . . . . .		8-17
Resupply . . . . .		8-18
Battalion Logistics Package . . . . .		8-19
Pre-Positioning Supplies . . . . .		8-25
Night Resupply Operations . . . . .		8-27
Section V. Maintenance Techniques. . . . .		8-27
Procedures . . . . .		8-28
Forward Support Maintenance . . . . .		8-28

<b>CONTENTS (Cont)</b>	
	Page
Section VI. Field Services . . . . .	8-32
Mortuary Affairs . . . . .	8-32
Clothing Exchange and Bath..... . . . .	8-33
Salvage Services . . . . .	8-33
Section VII. Personnel Support . . . . .	8-33
Personnel Services . . . . .	8-33
Religious Support . . . . .	8-34
Legal Service Support . . . . .	8-34
Finance Service Support . . . . .	8-34
Postal Service Support . . . . .	8-34
Enemy Prisoners of War . . . . .	8-34
Section VIII. Health Service Support. . . . .	8-35
Organization . . . . .	8-35
Operations . . . . .	8-35

## **Section I. Light Armor Combat Service Support Fundamentals**

CSS planning must be continual to support the tactical operation. Considerations must be given to everything that can affect the mission. CSS functions are performed as far forward as the tactical situation permits. CSS staff officers and commanders must plan CSS operations concurrently with the tactical plan. Planning priorities must be given to those areas that are vital to mission accomplishment.

CONOPS require that the force first be tailored for the specific mission, then echeloned to permit simultaneous deployment and employment. The initial assaulting echelon must organize with sufficient combat power to seize the lodgement and begin combat operations. The echelon that immediately follows must be equipped to expand the lodgement and undertake decisive combat operations. The final echelon must provide the sustainment for expanded operations.

Unlike traditional operations, CONOPS require that CSS as well as C2 be phased in early. Echelonment of light armor forces is not as simple as putting combat forces first, followed by CS and CSS. It requires corresponding echelonment of CSS as well. Rapid transition to decisive combat or other operations dictates that CSS accompany or closely follow each echelon. The organization and quantity of required CSS must be carefully determined to support the operation, considering both the potentially scarce transportation assets and/or the austere infrastructure of light infantry CSS assets.

Light armor may also be required to operate with other services. Support requirements and quantities depend on the mission, but the capabilities of the parent unit's CSS could be easily stressed. Proactive planning is necessary. The committed light armor force, whatever its size, must have accompanying CSS. Echelonment is the key, and redundancy is essential.

Light armor units may require augmentation for resupply and maintenance support for some CONOPS. Sustainment of CONOPS is also phased and requires detailed planning to

ensure the force is sustained in each phase. It is critical to synchronize the deployment of CSS units, supplies, and C2 with the increase in combat capabilities.

Light armor may require augmentation from corps units to conduct extended operations. It is imperative that the corps remain responsive to the battalion's operational needs and provide the required augmentation. This is especially critical when the battalion is conducting operations in a war environment.

The light armor battalion normally does not possess the required logistical redundancy to sustain forces providing augmentation throughout the division. These forces must normally deploy with their own sustaining and unique support packages, which are either organic or are provided by division and/or corps assets. Special consideration is given to the maintenance, repair, supply, transportation, and external communications requirements that augmentation forces provide to the unit.

## Section II. Contingency Combat Service Support Operations

### DEPLOYMENT

Brigade CSS for the deploying contingency force is provided by a DISCOM FAST. The team is tailored to satisfy the requirements of the supported brigade and is formed around a forward support maintenance company and a forward medical company. The DISCOM forms three echelons, one each to support the assault echelon, the follow-on echelon, and the rear echelon. Each is tailored to the mission.

**Assault Echelon.** This echelon consists of a portion or all of the FAST, as determined by the commander's concept of the operation. It is normally attached to the supported brigade during marshaling. This attachment remains effective during the assault phase. The FAST is tailored for the mission and can include elements from a forward maintenance company, medical company, and supply company. It can also include a detachment from the quartermaster airdrop equipment support company that can assist in the recovery and evacuation of airdrop equipment from the drop zone (DZ). The FAST may receive augmentation from corps based on mission needs.

**Follow-on Echelon.** Most of the DISCOM enters the AO in the follow-on echelon under the control of the DISCOM. Normally deploying by airland assault, the CSS follow-on echelon includes the remainder of the DISCOM HHC(-), a detachment from the quartermaster airdrop equipment support company, and a portion of the main support battalion (MSB). Remaining DISCOM units stay at the departure airfield in the rear echelon.

**Rear Echelon.** This echelon remains at the departure airfield or ISB and consists of elements not immediately required in the airhead to support the assault force. These elements include the remaining portions of the DISCOM MMC, MSB, quartermaster airdrop equipment support company, and the finance and personnel service companies (corps unit). Depending on the duration and nature of the operation, the rear echelon may be called forward and deployed into the AO after the lodgement is established.

### PLANNING CONSIDERATIONS

Brigades, battalions, and companies begin the logistical parallel planning process as soon as they receive a WO or instructions to implement an operation plan (OPLAN). The plan covers both support during combat and predeployment preparation. The part of the plan covering the predeployment phase includes supplying the unit, moving to the marshaling area, and conducting logistical operations in the AO.

A number of factors and considerations affect the logistical plan, including an analysis of the AO, the ground tactical plan, the anticipated duration of the operation, and unit strength.

**Basic Decisions.** For the logistical plan to progress in a timely manner, planners make basic decisions as early as possible. This allows all responsible agencies to prepare and execute plans for procurement and assembly of aircraft, supplies, equipment, and personnel. They decide on the following:

- What forces will be involved, how will they be organized, and what their principal objectives will be.
- What the tentative strength and composition of logistical units in the assault force will be.
- What type and amount of equipment should accompany the assault force.
- What initial supplies will be taken.
- What level of supplies will be maintained in the airhead.
- What airfields will be used for the landing of supplies.
- How long it should take to secure and organize airheads in the AO.
- Where rear bases to be used for supply purposes should be located.
- How available aircraft should be allocated for soldiers and supply.
- What evacuation policies should be set up.
- What capacity of the ISB should be maintained at forward air bases to facilitate supply.

Planners make detailed plans based on the basic decisions. The following considerations also affect the plan:

- How the desired quantities of supplies will be delivered to rear air bases at the proper time.
- How many, what size, and what type aircraft are available, and what are their loading characteristics.
- What material-handling equipment is available.
- What the distance is between rear air bases and landing areas.
- Facilities that are at the airhead include road network, storage facilities, and other facilities.
- How long the follow-on supply phase will go on before normal supply procedures are in effect.
- What quantities of supplies, equipment, and materials will be available within the proposed airhead for possible exploitation.
- If dedicated air MEDEVAC (fixed or rotary wing) is required and available.

## PHASES OF SUPPLY

During the early stages of a contingency operation, CSS operations mature at a pace dictated by the arrival of CSS assets into the AO. The nature of CONOPS demands that the bulk of initial forces to deploy are combat forces. There are three phases of supply in CONOPS—accompanying supplies, follow-on supplies, and routine supplies.

**Accompanying Supplies.** These include supplies taken into the airhead by assault and follow-on units. Accompanying supplies are issued to units before marshaling for early preparation before air movement and for delivery in the assault. They are carried into the assault area and include the supplies air-dropped with the deploying unit. Each unit receives and protects its three types of accompanying supplies—unit, force, and reserve supplies and are discussed in the following paragraphs:

- Unit supplies. These supplies include each soldier's basic combat load, basic loads of vehicular ammunition and other supplies, and prescribed loads of other classes of supply.
- Force supplies. These bulk supplies that the supporting units provide are retained at battalion or brigade. They include all classes of supply. The S4 of the deploying unit is responsible for controlling these supplies.
- Reserve supplies. These are additional supplies brought into the airhead under DISCOM control; they consist of the assault force reserve of Class III, Class V, selected items of Classes II and IV, and Class IX.

**Follow-on Supplies.** Follow-on supplies include all classes of supply; they are air-delivered after the unit has made its initial assault to help the unit operate until normal supply procedures can be set up. They are usually packaged, rigged, and stored at the beginning of the operation for immediate distribution on request. Quantities are based on the G4's estimate of the unit's daily requirements. The battalion S4 requests follow-on supplies for the battalion. Follow-on resupply is discontinued as soon as practicable. The two categories of follow-on supplies are—

- Automatic. These are delivered on a preplanned schedule once a day, beginning at a time based on the specific situation; they should be enough to sustain the deployed contingency force until routine supply is available. Automatic follow-on supplies are either airdropped to the unit or air-landed at a central supply point. Follow-on supply should not be scheduled for automatic delivery on the day an opposed-entry operation is to begin because assaulting units within the airhead should be fully occupied with seizing assault objectives, establishing the airhead, and recovering accompanying supplies.
- On-call. These are held in the departure area ready for immediate delivery to units on specific request. They include more of the items supplied by automatic follow-on, major items of equipment, and supplies that are not used at a predictable rate. The assault force determines the types and quantities of supplies to be held in on-call supply. Depending on the situation, on-call supplies can be prepackaged into loads by type or can be maintained in bulk pending request. Emergency on-call supplies must be delivered within 24 hours. Routine supplies are delivered on a flexible schedule 24 to 72 hours after the request.

**Routine Supplies.** These are requested and delivered by normal supply procedures. The DISCOM commander decides when routine supply deliveries should begin, depending on the tactical situation and supply status of the division.

## CLASSES OF SUPPLY

The following discussion provides information about the classes of supply and unique considerations for contingency forces.

**Class I.** This class includes meals ready-to-eat (MRE), tray pack, and A-type meals. Contingency units use MREs as the basic load and for follow-on supply. Tray packs and

A-type meals may be used later as the airhead is developed and the tactical situation allows. Personnel strength reports determine Class I requirements, thereby eliminating complicated unit ration requests.

**Class II.** This class includes clothing, individual equipment, tentage, hand tools, administrative and housekeeping supplies and equipment, and chemical decontaminants. Accompanying supplies include some Class II items. Follow-on and routine supply include small stocks of individual clothing and equipment while on-call follow-on supply includes major items of equipment as the situation dictates.

**Class III.** This class includes POL. Unit combat and utility vehicles are usually delivered to the airhead with fuel tanks three-fourths full to allow for expansion during airlift. Forecasts for POL are used by units to program delivery as part of the assault and follow-on supplies. Packaged POL and bulk POL supplies are used. Plans for POL should include retrograde movement of containers for refill.

**Class IV.** This class includes construction materials and all fortification and barrier materials. Units can only take a limited amount of Class IV into the objective area. Units exploit local resources.

**Class V.** This class of supply includes all ammunition. Planners must consider that, during the assault phase, ammunition tonnage is greater than the combined weight of all other supplies. Units take a basic load only. The amounts are expressed in the number of rounds for each weapon each day. Specified amounts of all types of ammunition for assault forces (enough for continuity of the combat operation) are provided follow-on supply. Follow-on resupply should be cross-loaded to offset possible loss of one type of item if aircraft are lost. Expenditure rates are based only on staff estimates, which must take into consideration the following factors:

- Degree of opposition to be encountered during and after the landing.
- Number and types of weapons landed with assault forces.
- Planned time of follow-on supply.
- Number and types of aircraft to be used.

**Class VI.** This class includes personal demand items, usually unavailable in the airhead, for sale or issue to soldiers and other authorized individuals. It should not be confused with the ration supplement and sundries pack. (The sundries pack has items necessary for the health and comfort of soldiers, such as essential toilet articles and confections. It may be available in the theater of operations for issue through Class I channels, pending establishment of adequate service facilities.)

**Class VII.** This class includes major end items. Certain items of this class can be retained for use in on-call resupply to replace those lost in combat or during delivery.

**Class VIII.** This class includes medical material, which is discussed with health services later in this chapter.

**Class IX.** This includes repair parts required for maintenance support of all equipment. Some critical repair parts deploy with the using unit in the assault phase. Maintenance units entering the airhead in follow-on operations carry prescribed load lists (PLL), shop stock listings, and designated items from the authorized stockage list (ASL). Additional techniques specific to light armor units are discussed later in this section.

**Captured Supplies and Salvage.** Units use captured or abandoned enemy materiel and supplies within the limitations prescribed by the commander. The use of captured equipment and materiel eases the logistical burden in the airhead by reducing the number of airframes needed in the early stages of the operation.

**Water.** Assault forces carry water into the objective area using filled canteens and the maximum amount of bulk water in containers such as 5-gallon water cans and water drums. They carry enough organic water to drink during travel to the airhead and for a short period of time while they are waiting there. Planners must ensure soldiers have enough water in the airhead. They should also determine the location of possible water supply points in the objective area. Soldiers carry water purification tablets in the event of contamination of local water.

## DISTRIBUTION OF SUPPLY

Supply and transportation units can accompany the assault echelon to recover assault supplies transported under control of the assault force and to establish necessary supply points. The assault force can use supply point distribution, unit distribution, or both to handle supplies. Throughput distribution bypasses one or more intermediate supply echelons to avoid multiple handling. Commanders choose this method whenever possible to deliver supplies from the rear echelon to the units in the airhead.

In the unit distribution method, the issuing agency transports supplies to the receiving unit's area. They can use ground transportation from supply points near DZs or airfields, or they can air-drop supplies directly to the using unit.

With supply point distribution, the receiving unit picks up supplies from a distribution point and moves them in organic transportation. Distribution points for essential combat supplies are positioned close to the soldiers to benefit from the security provided by the combat elements. This also prevents infiltrating hostile forces from cutting the supplies off from the receiving unit; it also shortens supply lines.

Supplies must be delivered to the airhead configured for easy handling. Limited CSS and transportation assets, as well as the tactical situation, affect supply distribution in the objective area. Multiple DZs must be selected, including sites close to the forward elements. Some supplies should be packed into container delivery system (CDS) bundles for expedient follow-on resupply.

## RESUPPLY BY AIR

Army and Air Force assets are used for both airland and airdrop delivery, although most Air Force deliveries are air-dropped. Airland has an advantage in that special equipment or rigging is not required. When airdrop is necessary, the Army furnishes the airdrop equipment and rigs the loads. The advantages of airdrop are the ability to place supplies in the immediate vicinity of the using unit and the capability to deliver a large amount of supplies in a short amount of time in the objective area. Airdrop rigging support for airdrop resupply comes from division and corps airdrop units.

**Preplanned Resupply.** Preplanned airdrop resupply can be automatic or on-call. Automatic airdrop resupply can be arranged for a designated time and place to support specific operations. On-call airdrop resupply uses prerigged and pre-positioned supplies that are arranged before an operation and delivered when requested by the supporting unit. To obtain a preplanned airdrop, units in the airhead request supplies and equipment from their DS unit in the FAST.

**Immediate Airdrop Resupply Requests.** Immediate airdrop resupply missions result from unanticipated, urgent, or priority requirements. Immediate requests for resupply missions must be flown faster than preplanned missions. Unless the JTF commander has allocated airdrop assets for strip alert or has otherwise kept airlift in reserve, immediate airdrop resupply requests are filled by preempting, diverting, or canceling lower priority preplanned missions.

**Helicopter Resupply.** Light forces use helicopters extensively to support CSS requirements. Light armor forces must deploy with sling-loaded equipment and train their personnel in slingload operations. There are two types of helicopters:

- Utility helicopters (UH). A UH is a general-purpose aircraft with limited carrying capability. It is used for such missions as transport of troops, cargo, or patients. Two Army helicopters are of this type; the UH-1H Huey can carry approximately 2,250 pounds externally, the UH-60A Blackhawk up to 8,000 pounds.
- Cargo helicopters (CH). The CH has the capacity for carrying greater weights and sizes than those carried by the UH. It can lift heavy, oversized loads, such as artillery pieces and ammunition. It can recover downed aircraft or vehicles. There are two CHs, the CH-47 Chinook and the CH-53E Super Stallion. The Chinook is the Army's primary CH. It can carry a maximum external load of 26,000 pounds. The Super Stallion is the primary CH of the USMC and USN and can lift up to 36,000 pounds on an external single-point cargo hook.

## MAINTENANCE

Light armor units must conduct efficient maintenance to ensure maximum and reliable availability of combat systems for the contingency assault force commander. Light armor units conduct maintenance in phases—predeployment, marshaling, and deployment. These phases take place in the objective area and after the expansion and buildup of the airhead.

**Predeployment Maintenance.** Predeployment maintenance includes normal scheduled maintenance under the SOPs of the light armor battalion at its home station. Maintenance assets are consolidated in the headquarters company of the light armor battalion under the direction of the battalion maintenance officer (BMO). Company maintenance teams (CMT) are organized for each company within the light armor battalion; the same procedures, outlined in FM 71-2, apply.

Special maintenance procedures may apply in contingency units prior to assuming a “most-ready” deployable status according to local SOPs. These procedures may include operational readiness inspections prior to a light armor company assuming most-ready status, live fires to confirm fire control accuracy, and other predeployment checks and services.

**Marshaling and Deployment.** To reduce maintenance requirements in the airhead, intensive maintenance is performed before departure. Organizational and DS maintenance support the marshaling unit as required. Contact teams are established to inspect and repair equipment during marshaling. The DMMC may direct the maintenance battalion to use the operational readiness float to fill critical combat requirements. Internal assets within the deploying light armor battalion may replace nonmission-capable equipment of the deploying light armor unit based on local SOPs and the commander's guidance

**Maintenance in the Objective Area.** Maintenance in the objective area during the initial assault and subsequent operations phase is performed by personnel organic to the battalions and to separate and attached companies and platoons. The amount of maintenance assets deployed is directly proportional to the amount of available space on aircraft delivering the assault force to the objective area and to the commander's priority of forces included in the initial assault. Page 8-9 discusses techniques commanders priority of forces included in the maintenance assets with the assault force and to maximize the number of combat systems available in the objective area.

The complete forward support company and other designated individuals from the light armor battalion maintenance platoon arrive in the objective area with the follow-on echelon as aircraft availability permits. Forward support company personnel establish the FAST to



provide DS maintenance of primary weapon systems and communications equipment. Maintenance personnel from the light armor battalion may augment the FAST maintenance section or may link up with and attach to the deployed light armor platoons or companies. To maintain the maximum number of combat systems available to the commander, they use battle damage assessment and repair (BDAR) and cannibalization procedures for severely damaged or inoperable systems.

**Expansion and Buildup of the Airhead.** During this phase, the remaining DS and organizational level maintenance elements are deployed. As the force builds, so do the maintenance assets, based on the aircraft flow into the airhead and the commander's priorities. The light armor battalion deploys tailored maintenance assets to meet the needs of the deployed force. The following paragraphs outline techniques for deploying maintenance assets along with the assault force.

## TECHNIQUES FOR DEPLOYING LIGHT ARMOR COMBAT SERVICE SUPPORT IN THE ASSAULT FORCE

This discussion contains methods in which the TF commander can deploy an interim support package which can support a small light armor unit until the light armor unit's parent unit CSS assets or additional divisional support units arrive in the AO. This support can be deployed in these forms:

- Critical repair parts package.
- CSS contact team.
- CSS package.

**Critical Repair Parts Package.** Deployment packages of small critical repair parts can be easily consolidated by unit PLL personnel and crated for transport in small packages. Packages will include only those parts that can be used to maintain combat readiness of a platoon- to company-size unit for a short period of time. The unit will typically be part of the assaulting unit or initial deploying unit. Repair parts included in the package should be only those that can be installed by vehicle crews under combat conditions without the aid of lifting equipment or unit level repair apparatus. Examples include (but are not limited to)—

- Air and fuel filters with seals.
- Communications equipment, such as cables and control boxes.
- Track shoe and blocks, center guides, and wedge bolts.
- Roadwheels and suspension parts.
- Relay switches.
- Batteries and battery connectors.
- Small arms repair parts.
- Hardware fasteners.
- Sling load sets.
- Firing probes (spare fire pins).

## FM 17-18

Parts packages can be transported to the AO in the following ways:

- Via the same aircraft used to transport the deploying combat vehicles.
- By air delivery as part of accompanying or follow-on supply.
- By slingload operations (if applicable).
- On a command-approved support vehicle deploying with the opposed entry or assault echelon.

**CSS Contact Team.** The CSS contact team gives the TF commander a relatively small team with the expertise to—

- Conduct unit level repairs on combat vehicles.
- Relieve the platoon leadership of much of the CSS coordination requirement during critical early hours of an opposed entry operation.
- Provide technical expertise on the weapon system not organic to the light infantry unit.
- Provide a liaison to the infantry battalion staff for both CSS and employment of the light armor force.
- Provide support despite changing task organization.
- Serve as an advance party for follow-on forces from the light armor battalion.

The CSS contact team can provide limited logistical support during the force buildup in the operations stage of a CONOP. It is not designed for extended operations. It provides key support during the most critical stages of a CONOP during the opposed entry or assault phase until adequate traditional CSS assets arrive in the AO in later phases. The team works for the light infantry TF XO or S4. As the remaining CSS assets flow in from the home station, the team chief can take control of those assets and put them to use immediately. The team eventually grows into a traditional configuration as all the assets arrive into the AO. The CSS contact team should, as a minimum, be composed of—

- Team chief (company XO, 1SG, or CMT leader).
- Turret mechanic.
- Hull mechanic.
- Communications equipment repairman.
- HMMWV.
- Critical repair parts package.

**CSS Package.** The CSS package provides the TF commander with a readily available option for operating with light armor deployed for a CONOP of short duration. The CSS package provides the minimum logistical needs of a light armor company when deployed as part of a light infantry TF. A light infantry battalion or brigade does not possess the transportation or recovery assets required to support a light armor company. The CSS package consists of (but is not limited to)—

- Team leader (company XO or 1SG).
- Company maintenance slice.
- Supply sergeant.
- Class III truck.

- Class V truck.
- Recovery vehicle with repair parts package.
- HMMWV for C2.

The light armor company will go with its organic slice of support assets when organized with a light infantry TF. Composition of the package includes recovery, cargo, fuelers, repair parts package, and maintenance. It can be tailored to meet specific requirements based on METT-T. The assets will come from the light armor battalion; they will deploy in echelons and in order of priority along with a deploying contingency force of up to brigade size. The large amount of bulk fuel and the size and weight of ammunition used by light armor would seriously stress the limited transportation assets available to a light infantry unit.

**Escalation of Conflict.** A CONOP that begins as an operation other than war may escalate to war; this requires the deployment of additional forces, including heavy armor and mechanized units. In this situation, the contingency force most likely is rapidly reinforced with the majority of its parent unit based on the direction of the joint staff. Remaining divisional CSS assets are prioritized and deployed to the AO sequentially as part of the division air flow or on ships.

As the force grows, the light armor unit evolves logistically and may begin to function as a battalion. The initial CSS support elements may revert back to the control of the light armor battalion once light armor CSS C2 elements arrive in the AO.

## Section III. Operations

### TASK FORCE TRAINS

The organization of trains varies according to the mission and support assets assigned to the TF. Trains may be centralized in one location (unit trains), or they may be echeloned in three or more locations (echeloned trains). Unit trains are formed in AAs and during extended tactical marches. Forming unit trains eases coordination and control and increases trains security. Unit trains are controlled by the S4, with the assistance of the S1. The HHC commander moves with the BSA to maintain coordination with the FSB and the brigade rear CP.

The field trains are usually in the BSA and are controlled by the HHC commander. Generally, field trains include the field trains CP (HHC CP), personnel and administrative center (PAC), mess sections, company supply sections, and remaining elements of the maintenance and support platoons that are not forward.

The BSA is that portion of the brigade rear area occupied by the brigade rear CP, FSB, TF field trains, FA field trains, and various unit-level support elements of other divisional troops. The BSA is usually 20 to 30 kilometers behind the FLOT. CSS assets in the BSA include elements from the FSB, maneuver unit field trains, and selected corps (corps support command [COSCOM] ) resources, as required. Brigade CSS is managed by the brigade S4 in coordination with the FSB commander.

The TF CSS assets are normally echeloned into company trains, battalion combat trains, and battalion field trains. The combat trains are organized to provide immediate critical support for the combat operation. Field trains are normally in the BSA under the control of the HHC commander, who coordinates with the brigade S4 and FSB commander for security and positioning. The composition of the combat and field trains varies according to the factors of METT-T.

## COMBAT TRAINS

The combat trains include the combat trains CP, the unit maintenance collection point (UMCP), the battalion aid station (BAS), the decontamination vehicle, some vehicles for supply Classes III and V, some supporting elements from the FSB, and the unit ministry team. The combat trains are controlled by the S4, assisted by the S1. All elements are tied to the combat trains CP by landline and operate on the A/L net.

The combat trains are generally 1 to 2 kilometers from the main CP. They should be close enough to the FLOT to be responsive to the forward units but out of range of enemy direct fire. The combat trains can expect to move frequently to remain in supporting distance of the combat elements (normally 4 to 10 kilometers). Factors governing positioning of the combat trains include the following:

- Communications between the combat trains CP, main CP, field trains CP, brigade rear CP, and forward units are required.
- Cover and concealment from both air and ground observation are desirable.
- The ground must support vehicle traffic.
- A suitable helicopter landing site should be nearby.
- Routes to logistic release points (LRP) or to company positions must be available.
- Movement into and out of the area must not be restricted.

BUAs are good locations for trains. They provide cover and concealment for vehicles and shelters that enhance light discipline for maintenance. Battalion train elements should occupy buildings near the edge of the BUA to avoid being trapped in the center and to provide easy access to MSRs.

The UMCP is established by the BMO to provide forward maintenance support to the TF. It is normally located in the combat trains or, separated but adjacent to the combat trains.

## COMPANY TRAINS

The most forward CSS elements are the company trains. The medical evacuation team (routinely attached to the company) and the CMT tracked vehicles, when forward, operate from the company trains. The company 1SG positions these elements, supervises the medical evacuation team, and establishes priority of work for the CMT.

In echeloned trains, the company supply sergeant usually operates from the field trains. Coordination between the company supply sergeant and the 1SG is conducted through the combat trains CP to the HHC commander over the A/L net; it is supplemented by face-to-face coordination during logistics package (LOGPAC) operations.

During combat operations, the company habitually operates with the maintenance and medical teams forward (company combat trains). The remainder of its CSS elements operate from the battalion combat trains, UMCP, or the field trains in the BSA. The 1SG is responsible for all of the company trains, but directly supervises the company combat trains from a survivable vehicle (maintenance M113). The supply sergeant is the 1SG's principal assistant; he supervises the company's assets in the battalion field trains.

The company trains will normally operate about 500 to 1,000 meters or one terrain feature to the rear of the company team. They provide immediate response for recovery, medical aid, and maintenance. This allows maintenance and other essential CSS functions to be performed in covered and concealed positions behind the FLOT.

Support during the battle will be limited primarily to medical and maintenance activities. Emergency resupply is performed by the 1SG when required. During a battle, whether defensive or offensive, the 1SG continuously monitors the company command net and send medical and maintenance support forward to the platoons as required. He keeps the combat trains CP informed continuously, either by radio or messenger.

**Trains Security.** CSS elements behind the FLOT must be prepared to defend themselves against guerrillas and partisans, forces that have broken through or bypassed the defense, and enemy air assault and airborne insertions.

The S4 is responsible for trains security when operating in a unit trains configuration. When trains are echeloned, the S4 is responsible for securing the combat trains, and the HHC commander is responsible for securing the field trains. The HHC commander coordinates with the FSB commander and brigade S4 to integrate the TF field trains into the BSA defensive plan. In all trains areas, a perimeter defense is normally planned and rehearsed immediately upon occupying a new position before normal support activities commence. Elements in the trains are assigned a specific sector to defend. Mutually supporting positions that dominate likely avenues of approach are selected for vehicles armed with heavy machine guns. Reaction forces and OPs will be made based on the unit SOP. To enhance security, an alarm or warning system is arranged. Sector sketches, fire plans, and obstacle plans should be prepared. Rehearsals are conducted to ensure that all personnel know the part they play in the defensive scheme. The officer in charge (OIC) at each location establishes a shift schedule for operations and security on a 24-hour basis.

**Command, Control, and Communications.** CSS C3 is the responsibility of the TF XO. The S4 routinely coordinates all logistics operations based on the XO's guidance. C3 facilities are the combat trains CP and the field trains CP.

The combat trains CP includes the S4 CP carrier (M577) with adequate cross-trained S1 and S4 personnel to ensure continuous operations. The combat trains must stay abreast of the tactical situation and current task organization. They must monitor the TF command net to identify CSS requirements and to receive requests, reports, and requirements from TF subordinate elements. Subordinate elements' requirements are analyzed, consolidated, and forwarded to the field trains CP or to the appropriate supporting agency. The HHC commander coordinates and directs elements in the field trains to take action to meet the forward units' requirements.

The field trains CP, established by the HHC commander, is the coordination and control center for the support platoon, PAC, maintenance platoon (-), and the battalion and company supply sections. Personnel from these sections operate the field trains CP under the supervision of the HHC commander. The HHC commander coordinates all requirements for TF organic and attached elements with all units in the BSA and parent units, as necessary.

Communications are critical to expedite the CSS effort. Unit 1SGs must report their losses and requirements as soon as they become known. The combat trains CP receives and analyzes these requirements and notifies the field trains or dispatches resupply vehicles from the combat trains as needed. When radio use is not possible, messages are sent with resupply or evacuation vehicles. The combat trains CP maintains positive control of vehicles moving forward to the LRPs. The TF sends reports to the brigade rear CP in the BSA. TF SOP establishes procedures for resupply without request in the event communications fail.

At TF level, CSS communications may be by any combination of FM radio, MSE, courier, or wire. The A/L radio net is used for most CSS traffic. For lengthy reports, use messenger, wire, or MSE.

The combat trains CP is the NCS for the A/L net. The S1, S4, HHC commander, BMO, support platoon leader, medical platoon leader, company 1SGs, and others (as required) operate on the TF A/L net. The combat trains CP also operates on the division or brigade ALL net based on command and support relationships.

## Section IV. Supply and Resupply Techniques

### CLASSES OF SUPPLY

**Class I.** This supply class includes subsistence and gratuitous health and welfare items. These considerations apply:

- Class I is automatically requested at brigade based on the daily strength report. The combat trains CP forwards the strength report to the field trains CP, which in turn instructs the mess section to prepare the rations. When a specific item is required, the S4 can submit a separate subsistence request through the field trains CP to the supply company of the FSB.
- The support platoon draws subsistence from the FSB supply company's Class I point in the BSA. Raw subsistence items are issued through supply channels. Rations are usually prepared in the field trains and delivered to the companies and attached units as part of the LOGPAC.
- A three-to-five day supply of MRE rations is stored on combat vehicles. Meals from this combat load are eaten only when daily Class I resupply cannot be accomplished. Frequency of unit feeding and use of A or B rations depend on tactical situations. If possible, troops should receive at least one hot meal per day. Hot rations should be packed in platoon-size portions rather than consolidated as company-size packages.
- Water is not a Class I supply item, but it is normally delivered with Class I. The HHC commander or support platoon leader coordinates with the FSB to pick up water from the water supply point. Water is delivered to the units using 400-gallon water trailers. Also, forward water points can be tested and approved by the battalion surgeon. During desert operations, each vehicle in the TF should carry *at least two* 5-gallon water cans to be refilled or exchanged for full cans during Class I resupply and LOGPAC operations. When necessary, the TF's 400-gallon water trailers can be augmented by collapsible water containers (common table of allowances items).

**Class II.** This supply class includes clothing, individual equipment, tentage, hand tools, administrative and housekeeping supplies and equipment, and chemical defense and decontamination items. These considerations apply:

- When Class II items are lost, destroyed, or worn out, unit supply sergeants send replacement requests through the S4 to the FSB.
- The S4 supply section or company supply sergeant picks up Class II items from the FSB supply company in the BSA and delivers them to the unit during LOGPAC operations. Expendable items such as soap, toilet tissue, insecticide, clothing, and TA-50 are provided during the LOGPAC.

**Class III.** This supply class covers all types of POL, including petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquids, and gases; bulk chemical products; coolant, deicer, and antifreeze compounds; components and additives of petroleum and chemical products; and coal. These considerations apply:

- The brigade S4's POL forecasts form the basis for division and corps stockage levels. POL is normally obtained by the battalion transportation section from the supply company's Class III supply point in the BSA. Empty fuel-handling vehicles and containers presented at a supply point are sufficient to obtain POL without a formal request. In exceptional cases, FSB fuel vehicles deliver to the combat trains area, or helicopters may deliver POL to the unit in 500-gallon collapsible drums. POL are requested through the S4 and handled in the same manner as Classes II, IV, and VII supplies.

- Company requests are not required for POL resupply. POL tanker vehicles will move forward with each LOGPAC. Packaged POL products are carried on each tanker vehicle. Requests for unusual requirements are submitted to the combat trains CP. Nonscheduled or emergency resupply of POL will be made by POL tankers stationed in the combat trains for that purpose.

**Class IV.** This supply includes construction materials, such as installed equipment and all fortification and barrier materials. These considerations apply:

- These are items for which allowances are not prescribed. The TF submits requests for Class IV items through the FSB to the DMMC.
- Requests for intensively managed Class IV items often require command approval. In that case, requests go through command channels to the division or corps G3 for release approval. Construction and fortification materials are normally delivered by DISCOM or COSCOM transportation and are carried as far forward as possible to reduce handling. Combat vehicles carry small amounts of these materials into the battle. These combat loads can consist of wire, pickets, and lumber as designated by unit SOP.

**Class V.** This supply class includes ammunition of all types (including chemical, radiological, and special weapons), bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items. These considerations apply:

- Class V supply is based on a required supply rate (RSR) and a controlled supply rate (CSR).
- RSR is the amount of ammunition, usually expressed in rounds per weapon per day, estimated to be required to sustain operations, without restriction, for a specified period. It is developed by the brigade S3 based on data from FM 101-10-1/2 and the situation. It is submitted through command channels.
- CSR is the rate of ammunition consumption that can be supported for a given period considering availability, facilities, and transportation. For ammunition fired from weapons, it is expressed in rounds per weapon per day. For other Class V items, it is expressed in various units of measure for specific items (for example, a specific amount per day or per week). The CSR for a given period may well be less than the RSR. The division ammunition officer (DAO) in the DMMC manages ammunition resupply by referring to CSRs for different types of ammunition.
- The TF receives ammunition from the ammunition transfer point (ATT) in the BSA, which is operated by the FSB supply company. A backup ATP is positioned in the division support area (DSA), operated by the corps ammunition company. If required, corps and division trucks and helicopters can deliver ammunition directly to the battalion combat trains, provided sufficient reaction time and ammunition are available.
- When ammunition resupply is required, a request (DA Form 581) is prepared by S4 or support platoon personnel for an amount based on unit expenditures (or projected requirements in the case of caches) and the current CSR. The request is validated by the DAO or his representative in the BSA, based on the CSR and the unit's previous consumption. The ammunition is then picked up and transported to the field trains, where it remains loaded until needed for company resupply.
- When companies request Class V resupply, the support platoon dispatches ammunition vehicles to an LRP, where a guide from the company guides them to the company area. Routine resupply of Class V is accomplished by LOGPACs.
- Requests for nonscheduled or emergency resupply of Class V are sent to the combat trains CP. Resupply is made by ammunition vehicles positioned in the combat trains for that purpose.

## FM 17-18

**Class VI.** This supply class includes personal demand items, such as candy, cigarettes, soap, and cameras (nonmilitary sales items). Some items in sundry packs are also Class VI items. These considerations apply:

- Requests for Class VI support are consolidated and submitted by the S1 through supply channels when a post exchange (PX) is not available.
- Resupply flow is the same as for Class I resupply.

**Class VII.** This supply class includes major end items such as launchers, tanks, mobile machine shops, vehicles, and organizational tool sets. Large items may be delivered by COSCOM directly to the TF trains. Smaller items are picked up by the support platoon at the distribution point in the DSA or BSA.

**Class VIII.** This supply class includes medical materiel, including repair parts peculiar to medical equipment. These considerations apply:

- Medical supplies are obtained by the medical platoon from the medical company in the BSA. Normally, these supplies are distributed by evacuation vehicles returning from the BSA to the aid station and from the aid station to the company team.
- The medical platoon leader coordinates with the S4 for additional supplies as required or based on the S1 loss estimate and projection for mass casualty situations.

**Class IX.** This supply class includes repair parts and components, including kits, assemblies, and subassemblies (repairable and nonrepairable) that are required for maintenance support of all equipment. These considerations apply:

- The TF's stock of repair parts is based on a combat PLL. The maintenance platoon's administration section manages repair parts.
- Repair parts are issued based on a specific request or by repairable exchange (RX). The TF obtains repair parts from the Class IX supply point in the BSA. Parts are moved forward during routine LOGPAC operations or as required to the UMCP. The maintenance platoon requests Class IX items (minus RX), quick supply store (QSS), and major Class IX subassemblies such as engines and transmissions by submitting single line requests (DA Form 2765) to the maintenance company of the FSB. Low-dollar-value and high-demand parts (light bulbs, wiper blades, common bolts and nuts) are obtained without formal requests from the repair parts QSS, operated by the FSB maintenance company. RX for selected repairable items (to include components and subassemblies) is handled on the basis of a simple exchange of the unserviceable item, with an attached DA Form 2765-1, for a serviceable item. If an unserviceable item is not available for exchange, the unit must submit a request (DA 2765-1). In some cases, controlled exchange and cannibalization may be required to obtain Class IX supplies.

**Class X.** This supply class includes materiel to support nonmilitary programs such as agriculture and economic development (not included in Classes I through IX). These considerations apply:

- Class X items are requested, obtained, and delivered by the S4 based on requirements from the civil military and/or operations channels.
- Specific instructions for request and issue of Class X supplies are provided by division or higher.



## SUPPLY PROCEDURES

The supply system provides many types of supplies to the TF. The most important of these are ammunition, POL, and repair parts for weapon systems. To ensure continuous support, supplies are provided as far forward as the tactical situation will permit.

In addition, the TF maintains some combat-essential supplies and repair parts. These are called combat loads, basic loads, and PLLs. The minimum stockage level is normally directed by division or higher. The purpose of having these loads is to enable a unit to sustain itself in combat for a limited period should there be an interruption in the resupply system. This period normally is 15 days for general supplies and 2 to 3 days for supply Classes I, III, and V.

The TF uses the following three methods to replenish its supply stock:

- **Supply point distribution.** The TF, using organic transportation, goes to the distribution point to pick up supplies. This is the normal method used by the TF support platoon to pick up supplies.
- **Unit distribution.** Supplies are delivered to a unit by transportation assets other than its own. The TF uses unit distribution to resupply its subordinate elements. Routine resupply occurs either on a daily basis or as the tactical situation requires.
- **Throughput distribution.** When feasible, supplies are shipped directly from the issuing agency as far forward as possible, provided the receiving unit has the material handling equipment (MHE) necessary to handle the shipping containers. This means some supplies may be issued directly to the TF from COSCOM or even theater army level, especially supply Classes III, IV, VII, and IX. This issue will most likely occur no farther forward than the field trains. However, the TF uses the established requisition channels, regardless of the issue method chosen by higher headquarters.

The S4 section is organized to process supply requests and to receive, issue, and temporarily store supplies. Distribution priorities for items in short supply are determined by the commander based on recommendations by the S4 and the operational requirements of the TF.

**Supply at the Company Level.** The supply sergeant is responsible for obtaining and delivering supplies to the company. He delivers small items out depending on the assets of the support platoon to deliver bulky or high-expenditure items. Priorities for delivery are established by the company commander, but the demands of combat will normally dictate Classes I, III, IV, V, VIII, and IX supplies as most critical to successful operations. Company-level considerations for these supply classes include—

- **Class I.** MRE are stocked on board each vehicle in a basic load prescribed by SOP (usually three to five days). MRE and water are delivered daily to the company from the field trains by the supply section. Hot meals are served when possible. Water is a critical item and must be replenished daily, especially when the unit is wearing chemical protective clothing. Rations are automatically requisitioned and issued by the S4 section based on daily strength reports sent to the S1 by the companies.
- **Class III.** Class III bulk and packaged products are delivered to the company by the support platoon. Resupply is accomplished from the battalion field trains as requested by the 1SG. If the tankers are attached to the company, they will return to the Class III point in the BSA for refill as soon as the company has been refueled. Small amounts of packaged products (hydraulic fluid and lubricating oil) are stored on each combat and tactical vehicle. These are replenished from stocks on the bulk fuel tankers.

- Class IV. Class IV items are requested through command channels. Basic loads of materials required for the construction of individual fighting positions should be a part of each vehicle's load plan; they are specified in the company team SOP.
- Class V. Class V resupply is based on a report of expenditures submitted to the combat trains CP by the 1SG. The ammunition is delivered to the company by the LOGPAC. This ammunition will be pre-positioned (in a defense or delay) or distributed as part of tailgate or service-station resupply.
- Class VIII. Class VIII items are provided by the medical platoon. Requests are submitted to the BAS by the medics. When the medical supplies are received, they are issued to the medics by the aid station or during ambulance exchange.
- Class IX. Class IX items are requested through the PLL clerk. They may be delivered to the LOGPAC or the maintenance platoon, or the maintenance team may have to return to the UMCP to pick them up.
- Maps. Maps are requested from the battalion S4.

**Supplies to Support Night Operations.** While all classes of supply are affected by night combat, Classes I and III present the most significant problems. Class I supply points and kitchens must operate around the clock. At night, vehicles tend to operate in a lower gear or idle for longer periods, thereby requiring more fuel and oil.

Other items of supply for night operations vary in demand depending on weather, terrain, and type of operation under consideration. For most tactical operations at night, units must expect an increased demand for—

- Engineer tape and stakes.
- Tarpaulin shelters.
- Night-vision devices (NVD) batteries.
- Flashlights and filters (green, blue, red, and infrared).
- Luminescent tape and paint.
- Red lens goggles.
- Replacement bulbs.
- Replacement night observation devices (NOD).
- Chemical lights.

## RESUPPLY

Resupply operations can be described as routine, emergency, and prestock. Each method is developed in the unit SOP and rehearsed in training. The actual method selected will depend on METT-T.

**Routine Resupply.** Routine resupply operations are the regular resupply of Classes I, III, V, and IX items, mail, and any other items requested by the company. Routine resupply takes place at least once daily. Periods of limited visibility are best for resupply, if possible. Resupply of Class III takes place at every opportunity. M1-series tank units in offensive operations routinely require refueling twice each 24 hours.

The LOGPAC technique is a simple and efficient way for routine resupply operations. A LOGPAC is a centrally organized resupply convoy originating at the TF field trains. LOGPACs should contain all anticipated supplies required to sustain the company for a

specified time, usually 24 hours or until the next scheduled LOGPAC operation. Company and battalion SOPs specify the exact composition and march order of the LOGPAC.

**Emergency Resupply.** Occasionally, as a result of combat, the company team may have such an urgent need for resupply that it cannot wait for a routine LOGPAC. Emergency resupply may involve Classes III, V, and VIII; NBC equipment; and on rare occasions, Class I. The TF will usually use support platoon and medical assets in the TF combat trains to conduct emergency resupply of company teams. Because it often occurs while in contact with the enemy, special techniques must be considered. When the platoons are under fire, limited supplies can be brought forward to the closest concealed position, where the tailgate method may be used. Individual fighting vehicles drop back to resupply at the direction of the platoon leader, then return to fight. For resupply during a lull in combat, the service-station method may be appropriate.

**Pre-positioning Supplies.** Pre-positioning supplies is required in most defensive operations. Normally, only Class V supply items are pre-positioned. The location and amount of pre-positioned ammunition must be carefully planned, and each vehicle commander must be informed. All leaders down to TC and squad leader verify the locations of the sites during their reconnaissance and rehearsals. Pre-positioning considerations include the following:

- Pre-positioned ammunition is on pallets, preferably in covered, protected positions.
- Pre-positioning frees cargo vehicles to bring more ammunition forward.
- The possibility of capture or destruction of pre-positioned ammunition is a risk for the company. The company cannot guard pre-positioned sites with the manpower available.
- Pre-positioned ammunition must be far enough away from vehicles and individual fighting positions that its destruction will not cause friendly vehicle or personnel casualties.
- Pre-positioning of fuel is difficult. It requires covered sites separate from ammunition, as well as additional equipment, including fuel transfer pumps and drums, blivets, and 5-gallon cans in quantity.

## BATTALION LOGISTICS PACKAGE

The most efficient resupply of a forward TF is accomplished by the LOGPAC, a method in which resupply elements are formed on the basis of logistics requirements of the unit. LOGPACs are organized in the field trains by the company supply sergeant under supervision of the HHC commander and the support platoon leader. LOGPACs are organized for each company team in the TF and moved forward for at least a routine resupply. When possible, all LOGPACs move forward as a march unit under the control of the support platoon leader. Special LOGPACs are organized and dispatched as required by the tactical situation and logistical demands.

The TF staff, under the guidance of the XO, must plan and coordinate LOGPAC operations in detail to ensure that they fully support the commander's tactical plans.

**LOGPAC Composition.** The TF SOP will establish the standard LOGPAC. Normally, a company team LOGPAC will consist of the following:

- Unit supply truck. This vehicle contains the supply Class I requirements based on the ration cycle, normally one hot meal and two MRE per man. The supply truck tows a water trailer and carries some full water cans for direct exchange. In addition, the truck carries any Class II supplies requested by the unit, incoming mail, and other items required by the unit. The truck may also carry replacement personnel and new or repaired equipment.
- POL trucks. Bulk fuel and packaged POL products are on these vehicles.

- Ammunition trucks. These vehicles contain a mix of ammunition for the weapon systems of the company team. Unit SOP establishes a standard load; reports and projected demands may require changes to this standard load.
- Vehicles for security or carrying additional supplies and personnel. These vehicles join the LOGPAC as coordinated by the support platoon leader and supply sergeant. They will also include returning combat vehicles.

**LOGPAC Procedures.** After the LOGPAC has been formed, it moves forward under the control of the supply sergeant, who requires a radio for control purposes. The support platoon leader may organize a convoy for movement of all LOGPACs under his control, or he may dispatch unit LOGPACs individually. The convoy may contain additional vehicles, such as a maintenance vehicle with Class IX supply to move to the UMCP, or an additional ammunition or fuel vehicle for the combat trains. The LOGPACs move along the MSR to an LRP, where the unit ISG or a unit guide takes control of the company LOGPAC. When the unit supply sergeant moves his LOGPAC to the LRP, he must know the MSR and be in radio contact (if he has a radio available) with the combat trains or HHC CP. Maintenance assets from the UMCP may join the company team LOGPAC at the LRP, if needed forward.

From the LRP, the company ISG or guide controls the LOGPAC and conducts resupply as described in FM 71-1. The unit ISG informs his supply sergeant of requirements for the next LOGPAC. The supply sergeant collects personnel (including KIAs and EPWs) for movement to the rear and outgoing mail and equipment for movement to the field trains. The LOGPAC then follows unit SOP and returns to the LRP or to the field trains.

LRP locations are determined by the S4 based on the tactical situation. Normally, two to four LRPs are planned. LRPs, as well as the MSR and combat trains and field trains locations, are included on the operations overlay, if possible. If not, they are on a CSS overlay. The combat trains CP notifies subordinates and the field trains CP in advance which LRPs will be used. The LOGPAC convoy's arrival time at the the LRP and the length of time it remains are normally established by SOP. For example, the SOP may call for an LRP time of 1800 hours to 2400 hours daily. This indicates that the LOGPAC convoy arrives at the LRP not later than 1800 hours. The unit must meet its LOGPAC, complete its resupply, and return the LOGPAC to the LRP not later than 2400 hours. If the tactical situation dictates otherwise, the S4 must determine the time and notify units accordingly. Subordinates must ensure that the resupply vehicles are returned to the LRP as soon as possible so they can return to the field trains and begin preparation for the next mission. If the LOGPAC cannot be completed on schedule, the combat trains CP must be notified by the ISG or XO.

At least one senior representative from the combat trains (S4, S1, or NCO) should be present at the LRP. He meets with the unit ISG and support platoon leader to coordinate logistical requirements and to ensure the LOGPAC release and return takes place efficiently. The battalion XO may also attend this meeting to assist in the CSS coordination for the TF. A brief meeting is normally held immediately before the ISG picks up his LOGPAC. Coordination may include—

- Changes in logistical requirements reflecting any last-minute task organization.
- Receiving hard-copy reports on personnel, logistics, and maintenance from the ISGs.
- Firsthand updates on the tactical situation and logistical status.
- Delivering and receiving unit mail and distribution.

The company supply sergeant or support platoon leader moves the LOGPAC from the LRP back to the field trains. The supply sergeant and support platoon leader then begin organization of the next LOGPAC.

The HHC 1SG coordinates and supervises resupply of the scout and mortar platoons, the main CP, combat trains, and attached support units. He operates primarily from the field trains. The following considerations apply for resupply of these elements:

- The platoon sergeant of these elements must submit a timely logistics status (LOGSTAT) report to the combat trains CP to ensure timely and accurate resupply. The most desirable method of resupply is to form small LOGPACs for these elements, with the platoon sergeant picking them up at the LRP in the same manner as a company 1SG. Attachments larger than a platoon must come to the TF with CSS vehicles, on which LOGPACs can be built.
- In some cases, the HHC 1SG will deliver the LOGPAC to the main CP, combat trains, and scout and mortar platoons. Attachments may receive resupply at one of these locations.
- Another option is for attachments to be resupplied at a nearby company team LOGPAC. The S4 coordinates this resupply *before* the LOGPACs are dispatched.
- Resupply operations for the scout platoon pose several unique problems. Special procedures may be necessary to resupply the scout platoon, including—
  - Resupplying the platoon by having each track pull off-line individually and move to a resupply site. This method may be feasible when the platoon is performing security for a stationary force.
  - Resupplying the platoon near the combat trains as the platoon repositions between missions.
  - Designating one Class III supply vehicle in the combat trains to fuel the platoon on short notice (opportunity refueling).

Units in DS of or OPCON to the TF are responsible for the resupply of their elements operating forward with the TF, except for the following:

- The ADA battalion commander coordinates for the TF to resupply DS ADA units with some classes of supply. This may be directed in higher headquarters SOPs and usually includes supply Classes I, III, V, and IX (common items).
- The TF provides engineer materials (supply Classes IV and V) to supporting engineer units. Additionally, engineer units supporting the TF should receive Classes I, III, V, and IX supply to the maximum extent possible.

The parent unit S4 or the company commander of the supporting element coordinates with the TF S4 or HHC commander on resupply of the forward elements. Normally, the supporting units' resupply elements assemble in the BSA and move to the TF field trains area. The HHC commander then dispatches these resupply elements forward, along with the TF LOGPACs, to the LRP. At the LRP, the platoon sergeant of the forward supporting element takes control of the resupply element. These resupply elements maintain contact with the combat trains CP while forward in the TF area. If coordinated between the supporting parent unit and the TF, the resupply of these forward elements is directly managed by the TF. The parent unit must provide the additional logistical assets necessary to supplement the TF's capabilities. No matter how support is coordinated, any element within the TF AO must be under the TF commander's control or at least remain in contact with the TF combat trains CP to avoid interfering with TF maneuver.

**Other LOGPAC Considerations.** Planning, preparation, and execution for the LOGPAC system must be conducted as with any other combat operation. The following considerations apply:

- **Planning.** The LOGPAC operations plan must take into consideration requirements of the company. Rehearsals must be conducted for route reconnaissance, LOGPAC formation, security operations during movement, and reactions during the convoy. The support platoon leader also needs to ensure that procedures are developed for lost vehicles, maintenance problems occurring during the movement, and changes to the mission, especially if the LOGPAC must wait along the supply route for the tactical situation to fully develop before resupply takes place. Refer to Chapter 4 for convoy security operations.
- **Preparation.** The support platoon leader and company supply sergeants, supervised by the HHC commander, must ensure all items necessary in the forward area are positioned in the LOGPAC. This includes the resupply vehicles and repaired or replacement combat vehicles that are being sent forward. The HHC commander will also ensure that wheeled recovery assets, if they are available, are placed at the rear of the convoy. He also needs to determine the tactical status of the forward elements, to include the tactical situation from the BSA through the battalion area. This information will allow the support platoon leader to brief the supply sergeants and drivers on situations they may encounter during movement and subsequent resupply operations. This could include minefield locations along the route of march, tank ditches, terrain considerations, NBC contaminated areas, and possible changes to the plan due to changes to the tactical situation.
- **Execution.** After the rehearsals and preparation are complete, the support platoon leader must control the LOGPAC from the field trains site to the LRP. He needs to ensure that radios are interspersed throughout the LOGPAC convoy to allow him to maintain control of the convoy. He needs to be made aware of any situation that develops and must issue instructions to handle the situation. The HHC 1SG can be invaluable in assisting the control of the entire convoy.

**Company LOGPAC Resupply.** Company supply sergeants assemble their LOGPACs under the supervision of the support platoon leader or HHC commander in the battalion field trains. Replacements and hospital returnees move to the company location on LOGPAC vehicles as required. Once the LOGPACs are prepared for movement, the supply sergeant will tactically move them as part of the TF resupply convoy led by the support platoon leader. In emergencies, a company LOGPAC may be dispatched individually to meet the 1SG at an LRP. This technique is not recommended because the LOGPAC is very vulnerable to attack, loss of communication, and disorientation when moving by itself.

The TF LOGPAC convoy is met at the TF LRP by company 1SGs, representatives from the combat trains CP and UMCP, and specialized separate platoon sergeants when necessary. Each 1SG turns in routine reports to combat trains representatives, turns in parts requisitions and the deadline status to the UMCP representative, picks up routine correspondence, and awaits the LOGPAC.

The 1SG or his representative meets the LOGPAC and then guides it to the company resupply point. The 1SG establishes the company resupply point using either the service station or tailgate issue technique. (NOTE: In light infantry units, service station resupply is called out-of-position resupply, and tailgate resupply is called in-position resupply.) The commander or XO, if delegated, will decide on the technique to be used and inform the 1SG. The 1SG will brief each LOGPAC vehicle driver on the resupply method to be used. He will also establish the company team resupply point and notify the commander when it is prepared. The commander will direct the platoons to conduct resupply based on the tactical situation. Either technique, or variations thereof, can be used for emergency resupply. The

following discussion outlines step-by-step procedures for service station and tailgate resupply, as well as for returning the LOGPAC to battalion trains.

Service Station Method (see Figure 8-1). The following procedures are used in the service station method:

- Tactical vehicles enter the resupply point using one-way traffic flow.
- Only those vehicles requiring immediate unit or higher maintenance stop in maintenance holding areas before conducting resupply.
- If not already evacuated, wounded in action (WIA), KIAs, and EPWs are removed from platoon vehicles once they stop at the refuel or reararm point.
- Vehicles reararm and refuel, rotating to each point.
- Crews rotate individually to feed, pick up mail, pick up supplies, and refill or exchange water cans.
- Once all vehicles have completed resupply, they move to the holding area, where the platoon leader or platoon sergeant conducts a precombat inspection (PCI), time permitting.
- Based on the enemy situation, vehicles pull out of their positions one vehicle at a time per platoon, by section, or by platoon. They are resupplied and rotated positions until the company has been resupplied.

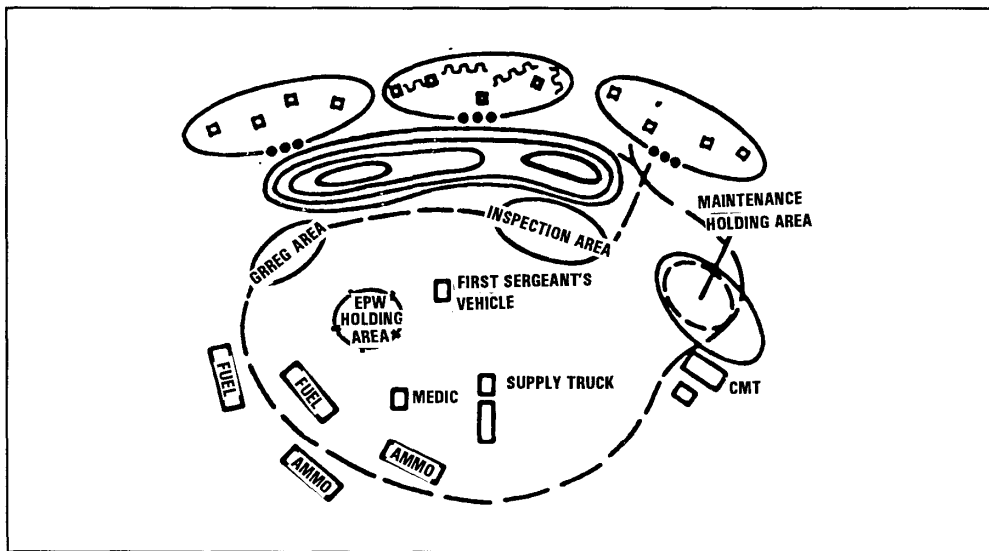


Figure 8-1. Service station issue method.

NOTE: Medical evacuation vehicles are positioned an equal distance between the refuel and reararm points. This decreases the number of stops that a vehicle has to make.

Tailgate Method (see Figure 8-2). The following procedures are used in the tailgate method:

- Combat vehicles remain in place or back out of their position a short distance so the resupply vehicle is not exposed. POL and ammunition trucks go to each vehicle position in turn.
- Crewmen rotate individually through feeding areas and pick up supplies, water, and mail.
- KIAs and personal effects are brought to the holding area by platoon personnel.
- Armored ambulances pick up critically wounded personnel; other injured are carried or walk to the ambulances for first aid.
- EPWs are centralized and guarded.
- Vehicles requiring maintenance move to the maintenance area.
- Inspections are completed by the chain of command at each vehicle position.

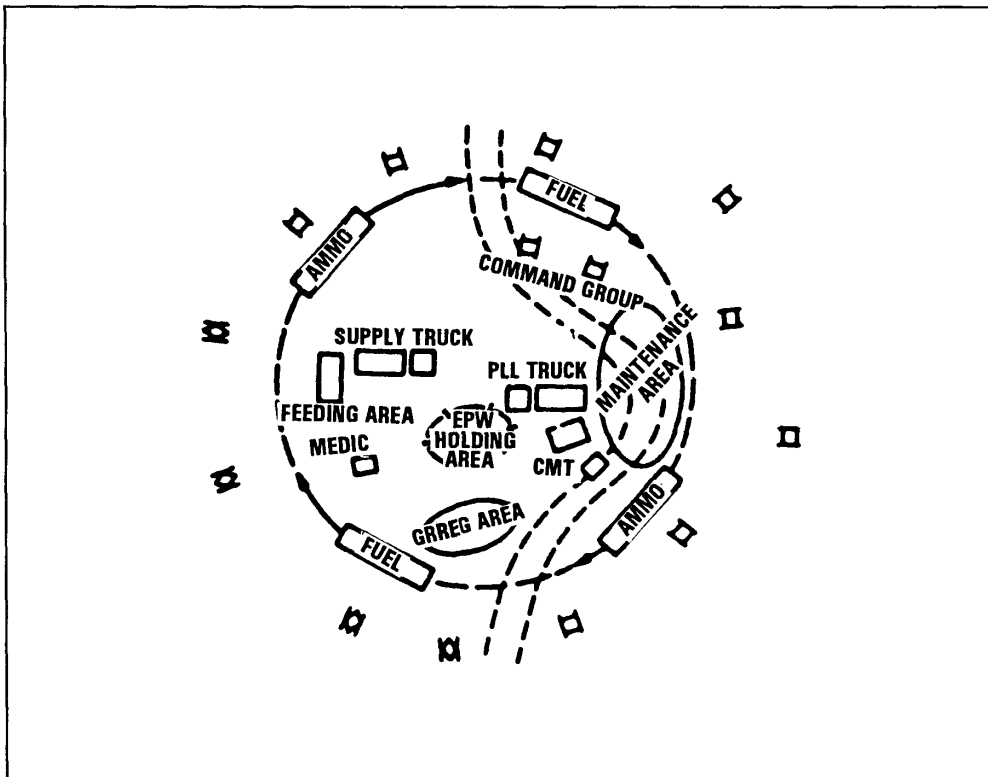


Figure 8-2. Tailgate issue method.

NOTE: The tailgate issue method is normally used only in an assembly area. If it is employed in forward positions, resupply must be masked by terrain. This procedure takes much longer than the service station method.



Preparation for LOGPAC Return to Battalion Trains. When the company team has been resupplied, LOGPAC vehicles are prepared for the return trip. Preparations include the following:

- Vehicles requiring recovery for maintenance or salvage are prepared for towing and lined up (if not previously recovered to the UMCP).
- KIAs are placed in mortuary bags or wrapped in blankets or ponchos and placed on fuel trucks, cargo trucks, and/or disabled vehicles.
- Slightly wounded personnel not already evacuated by air or ground ambulances are put on cargo trucks and/or disabled vehicles for transportation to the LRP.
- EPWs are consolidated on damaged combat vehicles or empty cargo trucks and guarded by infantrymen from a cross-attached platoon, by walking wounded, or by other company team personnel.

When resupply operations are completed, the 1SG or supply sergeant returns the LOGPAC to the LRP, where it is met by the support platoon leader. When possible, the reunited TF LOGPAC convoy returns to the field trains together. When METT-T requires, the individual company LOGPACs are dispatched individually to the field trains. Returning company LOGPACs individually is only slightly less hazardous than dispatching them forward on their own.

**Other Resupply Methods.** While LOGPACs are the preferred method of resupply, there will be times when other methods of resupply are required:

- Resupply from the combat trains (immediate resupply). The combat trains have a limited amount of supply Classes III and V for immediate unplanned resupply. The S4 coordinates immediate resupply from the combat trains and then refills or replaces the combat trains' assets.
- Cache. Caches involve positioning and concealing supplies at strategic locations around the battlefield. This is normally done during defensive operations when supplies are placed in subsequent BPs. Some key considerations are that caches need to be covered and concealed and need to have some type of security. Plans must be made for the destruction or movement of caches to prevent their capture.
- Mobile pre-positioning (MPP). MPP is similar to using caches except that the S4 retains control of the resources. With MPP, the supplies remain on the truck that is positioned forward on the battlefield. MPP is used when the S4 determines that the enemy situation or the terrain will prevent needed immediate resupply.

## PRE-POSITIONING SUPPLIES

The following discussion describes the two main methods of pre-positioning supplies:

**Method 1.** Class V supply is located in one place inside the assembly area or BP (see Figure 8-3). Each vehicle pulls into the central area to upload ammunition and rations, if any are pre-positioned. Pre-positioned fuel tankers are set up at the rear of the position, and refueling is done using the service station method.

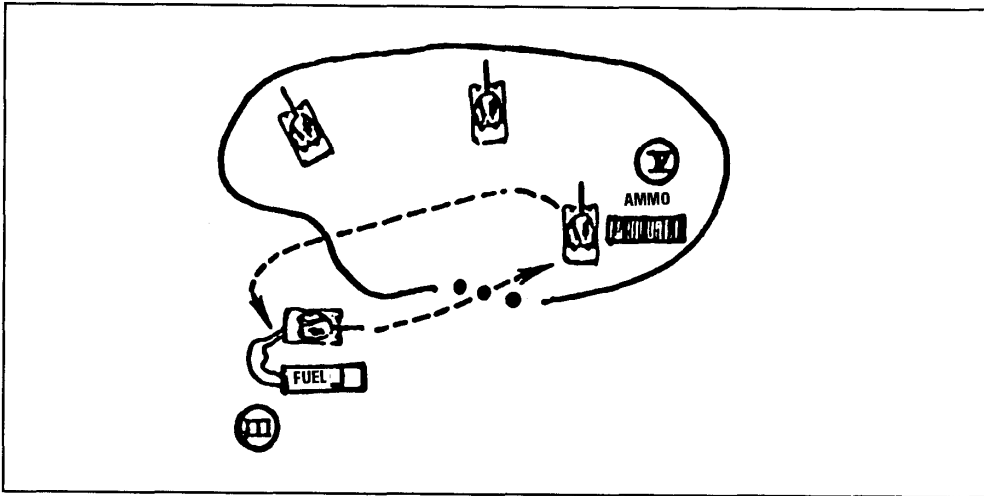


Figure 8-3. Pre-positioned supplies, method 1.

**Method 2.** Class V supply is pre-positioned (and dug-in if time permits) at each vehicle position, and Class III fuel tankers are pre-positioned in one location for the entire platoon (see Figure 8-4). In this method, Class V supplies are placed on the ground in the vicinity of each vehicle position. When the platoon arrives, three vehicles move into their fighting positions and begin to rearm. The fourth vehicle stops at the Class III fuel tanker located to the rear of the position and refuels. When that vehicle is full, it moves into its fighting position and begins to rearm while another vehicle moves to the refuel point.

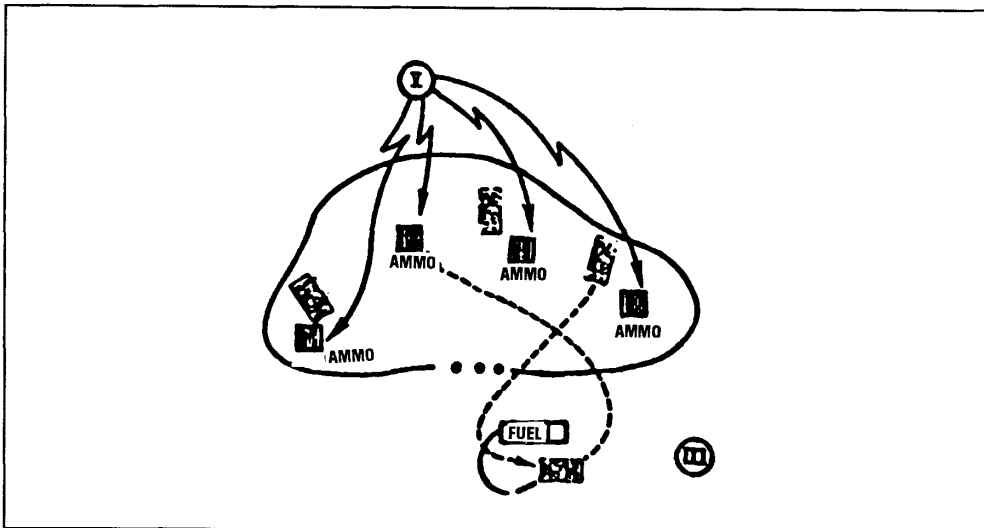


Figure 8-4. Pre-positioned supplies, method 2.

## NIGHT RESUPPLY OPERATIONS

At night, routine resupply operations are accomplished by LOGPACs; these operations are addressed in the TF SOP. Supply vehicles are led to an LRP. At the RP, the company 1SG meets his resupply package, then guides it to the company's forward position. The convoy moves in total blackout. At the RP, the company 1SG identifies his LOGPAC using prearranged signals. Possible signals include—

- Filtered flashlights, color-coded for unit identification.
- Geometric designs on vehicles identifying supported units.
- Checkpoints, marked on the ground by luminescent markers to designate the linkup point for specific companies.

## Section V. Maintenance Techniques

Maintenance is continuous. It starts with preventive maintenance by the operator and crew and continues through repairs accomplished by maintenance personnel. All personnel must be trained to accomplish the necessary tasks in all conditions. Preventive maintenance checks and services (PMCS) must be a daily crew responsibility; the DA Forms 2404 are collected during the resupply operation. Vehicle commanders submit the DA Forms 2404 to the 1SG or CMT chief prior to receiving rations. The CMT performs maintenance work as far forward as possible.

Maintenance and recovery are initiated on site by the equipment operator and crew. Once the problem has been identified, the operator and crew start corrective action, which includes—

- An initial status report to the platoon leader or platoon sergeant providing the conditions, location, and circumstances.
- An estimate of the situation to determine support requirements, including self-recovery, field fixes, assistance from nearby vehicles, or assistance from battalion.

When it has been determined that the needed repair is beyond the crew's capability, the platoon notifies the 1SG who dispatches the CMT. If additional assistance is required, the 1SG or CMT chief requests it from the BMO on the A/L net.

As a general rule, the CMT should work on a vehicle for no more than 2 hours. If the vehicle cannot be repaired within that time, it is towed to an LRP, to the MSR, or to the UMCP, as necessary.

If a vehicle cannot be recovered or is damaged beyond repair, personal items, radios, crew-served weapons, ammunition, and other serviceable items and parts are removed. The automotive and weapon systems are rendered nonfunctional to prevent enemy use. Destruction or disabling will be accomplished only on the commander's order.

The CMT normally travels at the rear of a company echelon during a road march; the exact location is an SOP item. If a vehicle becomes disabled, the crew moves it as far off the road as possible and dismounts a road guide to assist the passage of other vehicles. If the crew cannot make repairs, they wait for assistance from the CMT.

## PROCEDURES

**Battlefield Damage Assessment and Repair (BDAR).** BDAR entails inspecting battle damage to determine its extent, classifying the type of repairs required, and determining the maintenance activity best suited to accomplish the repair. Battlefield damage repair involves the immediate repair of equipment by field expedient methods, if possible. Vehicle commanders are the first line of leaders that are trained in techniques of BDAR; each subsequent echelon of maintenance conducts BDAR. BDAR manuals outline specific procedures for most combat vehicle systems.

**Categories of Maintenance.** Maintenance involves inspecting, testing, servicing, repairing, requisitioning, rebuilding, recovering, and evacuating. Repair and recovery are completed as far forward as possible, at the lowest capable echelon. When equipment cannot be repaired on site, it is moved only as far as necessary for repair. When all maintenance requirements of the TF cannot be met, the XO determines maintenance support priorities for subordinate units based on operational requirements of the TP and on recommendations of the S4 and BMO. The Army maintenance system consists of the following four levels of maintenance:

- **Unit maintenance.** Unit maintenance consists of maintenance tasks performed by the operator and crew and those performed by unit mechanics:
  - Tasks accomplished by the crew or operator include PMCS, inspecting, lubricating, cleaning, preserving, tightening, spot painting, and minor adjustments. The crews must perform maintenance within their capability and promptly report any requirements beyond their capability.
  - Unit mechanics isolate faults with built-in or automatic test equipment, conduct visual inspections, make minor adjustments, and repair end items by exchanging faulty modules and components. These functions can be performed on site or in the UMCP. Unit mechanics also perform recovery tasks.
- **Direct support (DS).** DS mechanics diagnose and isolate defective end items. DS maintenance support teams (MST) operate from the UMCP. If equipment cannot be repaired in the UMCP due to time constraints, work load, or the tactical situation, it is recovered to the BSA for repair. The maintenance company also operates a repairable exchange (RX) activity and performs light body repair.
- **General support (GS).** GS maintenance involves repair of modules and components by replacing internal pieces or parts and repair of end items involving time-consuming tasks. GS is performed by units at echelons above corps.
- **Depot.** Depot maintenance personnel rebuild end items, modules, and components. They perform cyclic overhaul and extensive modifications of equipment. Depot maintenance is performed by US Army Materiel Coremand (AMC) depots, contractors, and host-nation support personnel in freed sites.

## FORWARD SUPPORT MAINTENANCE

**Combat Power.** Combat power is maximized when disabled equipment is repaired as far forward and as quickly as possible. The BMO, in coordination with the XO, directs the maintenance effort for the TF by using established time guidelines and by coordinating maintenance actions.

**Time Guidelines.** Maintenance time guidelines are the maximum times that unserviceable equipment should remain in various support areas. Battle damage assessment (BDA) and diagnosis indicate repair time. The item is repaired on-site or recovered directly to the appropriate maintenance echelon in the appropriate support area. Factors in the decision include—

- Tactical situation.
- Echelon of work required.
- Availability of required repair parts.
- Current work load in each area.

Table 8-1 lists typical maintenance time guidelines. These times are flexible and should *not* be considered restrictive.

Table 8-1. Maintenance time guidelines.

TIME FOR REPAIR (HOURS)	LOCATION
Less than 2	On site
2 to 6 (and can be towed until repaired)	UMCP
6 to 24 (or less than 6, if vehicle cannot be towed)	Field trains
24 to 36	DSA

**Maintenance Concepts.** The following discussion of battlefield maintenance concepts places the various maintenance echelons into proper perspective. The discussion illustrates how echelons overlap to provide continuous maintenance support to the maneuver units.

The BMO task organizes the maintenance platoon based on his analysis of current and anticipated requirements. He is concerned with providing the appropriate support at each of three locations—the maneuver company, the UMCP, and the field trains. Normally, the BMO positions CMT recovery vehicles and equipment with crews to support each company. The intent is to provide a quick-fix capability for those items that can be repaired in less than 2 hours and recovery capability for those items requiring more extensive repairs. The remainder of the CMT operates from the UMCP under the control of the BMO. When the tactical situation permits, the entire CMT may go forward to provide additional support forward.

The UMCP is normally under the control of the BMO and battalion maintenance technician (BMT). It is task organized with the maintenance platoon headquarters (-), one or more PLL trucks from the administration section, remaining recovery vehicles from the recovery section, track automotive and turret repair teams from the service section, wheeled vehicle assets from the CMTs, and the DS MST. Task organization of the UMCP is modified based on the BMO's analysis of maintenance requirements and the tactical situation. The UMCP must become a collection point for nonoperational vehicles (those that cannot move on an hour's notice). Anything that cannot be repaired in the UMCP, or that cannot be towed by UMCP assets, will be recovered to the field trains or directly to the FSB maintenance company in the BSA.

The remainder of the battalion maintenance platoon is in the field trains under the control of the battalion motor sergeant. The maintenance platoon organizes to support cross-attachment as well as pure battalion operations. As previously discussed, one CMT is cross-attached to support each detached company. This team may be supplemented by an element from the maintenance services section.

In the unlikely event that the battalion detaches more than two companies, the maintenance platoon will task organize, including PLL, to support this detachment. Additionally, the administration section is organized to quickly detach one PLL truck, with trailer and a PLL clerk, to support the detached company. To support this concept, the administration section configures four PLL trucks and trailers to carry the PLL needed to support one maneuver company each. Additionally, these vehicles will transport enough packaged POL to support repair operations. One of the remaining PLL trucks and trailers will be configured to carry the PLL associated with headquarters and headquarters company (HHC) tracked vehicles. The remaining PLL truck and trailer will be configured to carry the PLL for the battalion's wheeled vehicles; it operates from the field trains.

High-demand, low-volume parts are carried on the CMT's tracked vehicles. The selection of parts carried forward on the tracked vehicles, as well as the breakout of parts to be carried on each PLL truck and trailer, should be addressed in the battalion maintenance platoon SOP.

Attached maintenance elements come under the control of the BMO. Since the attached maintenance elements are equipped and trained to support the corresponding attached maneuver unit, they are used primarily for this support. Task organizing attached maintenance assets is not routinely done for the following reasons:

- PLL repair parts cannot be readily split up to support lower than company level.
- Special tools and test sets are usually one-of-a-kind items and will not be readily available to detached mechanics.
- Personnel movements require coordination, transportation, and time. When the task organization changes, the process must be reversed.

The maintenance process is initiated on site by the equipment operator and crew. BDAR is performed, and whatever the cause of the equipment malfunction, the operator and crew begin corrective action. The vehicle commander makes an initial status report to the platoon leader describing the inoperable condition(s), circumstances, and location. When subject to direct fire, the vehicle commander uses smoke to screen the vehicle, if possible. He employs self-recovery or uses another vehicle to push or tow his vehicle to a covered position. He then isolates the fault as quickly as possible and determines what will be needed (recovery, parts, or repairs) to fix the vehicle. He does this using the procedures outlined in the BDAR manual, considering mission-essential maintenance only. The vehicle commander considers use of self-recovery, field fixes and expeditors, and assistance from other elements in the vicinity to put his vehicle back into action. He consults the BDAR criteria in the technical manual; if repairs are beyond his capability, he requests assistance as prescribed by unit SOP. If the item can be returned to operation by local resources, he initiates action to do so.

When the platoon leader determines that repair is beyond the platoon's capability, he contacts the 1SG or XO. The 1SG dispatches the CMT as soon as it is feasible and informs the BMO over the A/L net. Procedures for requesting support are in the TF SOP, to include applicable communications security (COMSEC) requirements. Information usually required includes—

- Identification of unit.
- Identification of equipment.
- Location (map coordinates).
- Nature of damage.
- Evaluation of on-site repair (extent of damage, level of repair, and estimated time required).

- Repair parts required, if applicable.
- Enemy situation, security, and NBC considerations.
- Recommended route of approach.
- Contact points for unit guides, if required.

The CMT HMMWV and recovery vehicle are forward in the company trains. These vehicles carry the tool boxes, unit-level technical manuals, and a limited number of special tools and repair parts. (M1 and M2 test equipment normally remains at the UMCP because of its size; it may be sent forward as needed based on the BMO's and CMT's assessments.) The CMT confirms the vehicle commander's BDA before attempting repairs. The CMT usually repairs damage on site if the repair can be completed within two hours.

If a damaged vehicle cannot be repaired within two hours, it is recovered to the UMCP or the field trains to make maximum use of the weapon systems for defense of the site. However, before a recovery vehicle is committed, other recovery means are attempted. Field expedient procedures may return enough mobility to let the damaged equipment move. Other damaged (but mobile) equipment may tow the damaged vehicle. The tactical situation may permit an operable like vehicle to do the recovery when a recovery vehicle is not available. The option of having the CMT recover the vehicle only as far as a maintenance collection point (MCP), or the MSR, and then returning to the company to continue support should also be considered. Maintenance platoon recovery vehicles can then recover the vehicle from the predetermined drop site to the UMCP.

Damaged vehicles recovered to the UMCP are repaired by maintenance platoon elements or MSTs from the FSB maintenance company. When not involved in on-site repairs, the CMTs may also repair vehicles in the UMCP. This is especially true of work requiring diagnostic test equipment that cannot be taken into combat positions.

Vehicles that cannot be repaired within 6 hours or that would otherwise overload the capability of the UMCP are recovered to the field trains or directly to the FSB maintenance company collection point for repair. This recovery may be accomplished by the CMT recovery vehicle alone; by the CMT recovery vehicle to an MCP or MSR, then by a maintenance platoon recovery vehicle; or by a combination of recovery vehicles and heavy equipment transporters (HET). The BMO will coordinate and direct the exact method to be used. The use of HETs is preferred, but they are restricted by road requirements and availability. HETs are requested through the FSB maintenance company. Some crew members accompany the vehicle to the rear to assist mechanics in the repair of the vehicle and return it to the unit when repaired. They also man operational weapon systems on the vehicle to provide additional security for rear areas. Communications-electronics (CE) equipment installed in the vehicle is evacuated with the vehicle. Personal equipment of crewmen not accompanying the vehicle and any special equipment are removed before the vehicle leaves the area.

The UMCP displaces with the other elements of the combat trains. During periods of frequent displacement, the BMO may direct that the UMCP displace by echelon. In this case, some assets of the maintenance platoon, including the BMO, complete repair on vehicles at the old UMCP, then displace forward to the new location. Maintenance platoon assets not involved with these repairs move with the remainder of the combat trains and establish the forward UMCP.

During rapid forward moves such as an exploitation, the UMCP conducts mission-essential maintenance only (MEMO) repairs and simple recovery. Other disabled vehicles are taken to MCPs on an MSR and remain to be repaired or evacuated. Field trains and the maintenance company of the FSB displace forward to subsequent locations. The BMO coordinates repair or evacuation with the battalion motor sergeant in the field trains.

In field trains, remaining elements of the battalion maintenance platoon perform other tracked and wheeled vehicle maintenance and Class IX resupply. The BMO coordinates

requirements with the HHC commander and with the maintenance company of the FSB. He also coordinates maintenance requirements with the parent headquarters of any attached or supporting elements working with the TF.

**Maintenance Operations at Night.** At night, as during the day, vehicles are processed and integrated into the work program as soon as they are damaged. They are positioned in lightproof or light-suppressing shelters. Permanent structures such as warehouses, civilian garages, and barns are used. Work continues until the repairs are completed.

If large shelters are not available, mechanics repair small components, on or off the vehicle, under a lean-to or some other makeshift shelter constructed of a tarpaulin or a poncho. Chemical light sticks provide adequate light for most detailed repairs under these conditions.

Most maintenance work is accomplished in fighting positions or in the UMCP. To prevent congestion and confusion, a staging area is designated for vehicles awaiting repair. Tow cables or tow bars remain attached to vehicles that cannot move under their own power. This makes it easier to move the vehicle quickly when necessary.

Forward of the UMCP, mechanics use night-vision goggles (NVG) to accomplish most repairs, marking tools and other small components with luminescent tape. Using night-vision devices (NVD) for repair of equipment is a very time-consuming and dangerous process, requiring extreme care. When NVG are not available, repairs are made under lightproof shelters. Heavy vegetation or thick overhead foliage provides additional concealment.

## Section VI. Field Services

### MORTUARY AFFAIRS

Normally, divisions do not possess organic mortuary affairs assets. It is the responsibility of the mortuary affairs NCOs within the support battalion to train personnel on mortuary affairs operations. Personnel under the control of the mortuary affairs NCO are responsible for mortuary affairs support for the division until mortuary affairs augmentation is available.

**Commander's Responsibilities.** All commanders are responsible for the search, recovery, initial identification, and evacuation of deceased personnel from their area of responsibility. These remains include, but are not limited to, members from their own unit, other services, allied, enemy, and other remains that may be found in the area. Commanders must ensure that recovery and evacuation of remains are conducted in a respectful manner. Evacuation by air or ground to the nearest collection point, or to the theater evacuation point must be accomplished promptly.

**Search and Recovery.** When unit personnel recover remains they must preserve all items that may be used to establish an identity. They must check to see if there are identification tags or personal effects on the remains and ensure these items stay with the remains. When identification tags are found anywhere but around the neck of the remains, they are placed in a personal effects bag. If DD Form 1380 (Field Medical Card) is found, soldiers must ensure it is attached securely to the remains and protected from body fluids. All personal effects and equipment are put with the remains and the immediate area searched to ensure all effects and portions of remains have been recovered. The remains are shrouded with any suitable material, such as a human remains pouch, poncho, or poncho liner. The remains are then evacuated to the nearest collection point or directly to the theater evacuation point. Emergency burials should only be conducted when the tactical situation does not allow evacuation.



## CLOTHING EXCHANGE AND BATH

Clothing exchange and bath (CEB) services are provided by the supply and service (S&S) company, when augmented. CEB services are requested through the brigade S4. The request must specify location of the unit making the request, desired time for service, and range of clothing sizes for unit members. The requesting unit must be prepared to provide soldiers to help set up the CEB point. During CONOPS, CEB services may not be available. Planning for alternate means, such as “Australian shower buckets,” is recommended.

## SALVAGE SERVICES

Salvage services are provided by the FSB supply company. A salvage collection point is established in the BSA. It receives serviceable, unserviceable (repairable), discarded, abandoned, and captured supplies and equipment. The salvage point will not accept COMSEC and medical supplies, toxic agents, radioactive materials, contaminated equipment, aircraft, ammunition, and explosives.

# Section VII. Personnel Support

## PERSONNEL SERVICES

Personnel service support includes CSS functions that sustain the morale and welfare of the soldier. These include personnel and administration (P&A) services, religious support, legal services, finance services, public affairs, postal services, EPW support, and medical support. P&A services fall within the staff area of the battalion S1.

**Strength Accounting.** Company teams and attached units submit a personnel daily summary report to the S1 in the combat trains CP. The S1 forwards a TF consolidated report through brigade to the division adjutant general (AG). The PAC in the field trains is furnished an information copy. These reports, together with authorized position vacancies, are the basis for requesting individual replacements and Class I resupply. Accurate strength reports also provide the commander and staff with information to plan future operations. Daily reports are included in the TF SOP.

**Casualty Reporting.** The S1 ensures that both strength and casualty reporting occur in a timely and accurate manner. Casualty reports provide the detailed information necessary to cross-check strength reports. Casualty reporting occurs as soon as possible after the event and is initiated by the squad leader, TC, or any individual having knowledge of the incident. The casualty feeder report (DA Form 1156) is carried by all small-unit leaders to report battle and hostile-action casualties and nonbattle casualties. It provides initial information to the AG for preparing the casualty report used by DA to notify next of kin. The casualty feeder report also validates the soldier’s line-of-duty status, which determines payment of benefits. When a soldier is reported missing or missing in action (MIA) or when the remains are not under US control, a witness statement (DA Form 1155) accompanies the casualty feeder report. Casualties are reported to the 1SG, who collects and forwards them to the combat trains CP. The S1 cross-checks the reports, requests any needed clarification, adjusts unit strength reports, and forwards the reports through the brigade S1 to the AG.

**Replacement Operations.** Replacement flow is monitored by the PAC in the field trains. The HHC commander establishes a replacement receiving point in the field trains and notifies the brigade S1 of its location. All replacements or returnees are brought to this point for initial processing. The division AG is normally responsible for delivering replacements to the BSA. Hospital returnees are handled as replacements by the division AG. Every reasonable effort is made to return the recovered soldier to his original unit. Returnees from the

BSA treatment station are released directly to their field trains. They move forward to their unit with the LOGPAC.

**Other Administrative Services.** Intense combat greatly reduces time available for processing of personnel actions. Consequently, actions not seriously affecting troop morale will receive low priority. During lulls in the battle, the S1 and PSNCO complete all other necessary P&A actions. If possible, these are accomplished by forming personnel contact teams that move forward to company locations.

## **RELIGIOUS SUPPORT**

Religious support is provided by the unit ministry team (one chaplain and one chaplain assistant) operating from the combat trains. The unit ministry team is dedicated to meeting the religious, moral, ethical, and spiritual needs of soldiers in combat. Additionally, chaplains advise the commander on the state of the soldiers' religious support needs. He also provides information on local religious groups and their possible effect on mission accomplishment.

## **LEGAL SERVICE SUPPORT**

Legal service support is provided to the TF on a GS basis. It includes legal advice to commanders on military, domestic, foreign, and international law and advice and representation for soldiers in military justice and administrative actions.

## **FINANCE SERVICE SUPPORT**

Finance units provide DS/GS on an area basis. Individual support includes casual payments, check cashing, currency conversion, and pay inquiries. Organizational support covers contracting support and commercial vendor operations, and reimbursement of imprest fund cashiers and Class A agents. Before deployment, units will have officers with appointments prepared and trained for Class A agent duties. FM 14-7 provides detailed information.

## **POSTAL SERVICE SUPPORT**

Postal service support is provided by the postal element assigned to the corps DS postal company, which receives mail and separates it by battalion, then turns it over to the brigade S1. The battalion mail clerk receives and sorts the mail and distributes it to the unit supply sergeant (assistant mail clerk), who delivers it to the 1SG or to the soldier himself during LOGPAC resupply. When a soldier mails a letter, the procedures are reversed.

Normally, mail is delivered and received with the LOGPAC. The brigade and TF S1s must establish procedures to ensure mail is sorted and delivered based on current task organizations. Procedures must also be established to properly secure accountable mail until it is delivered to the addressee. Packages are not routinely sent forward during combat operations; procedures for handling packaged mail are normally established by division or higher.

## **ENEMY PRISONERS OF WAR**

The S1 plans and coordinates EPW operations, collection points, and evacuation procedures. EPWs are evacuated from the TF area as rapidly as possible. The capturing company is responsible for guarding prisoners, recovering weapons and equipment, removing documents with intelligence value, and reporting to the main and combat trains CP. EPWs are evacuated to the brigade EPW collection point on returning LOGPAC vehicles or are moved to the MSR under guard and their location reported to the S4, who

coordinates transportation. As necessary, the S2 reviews and reports any documents or information of immediate value. The S4 coordinates evacuation of large amounts of enemy equipment. Wounded prisoners are treated through normal medical channels but are separated from US and allied patients. The unit chaplain may conduct services for EPWs or assist detained chaplains of enemy forces.

At company level, EPWs are transported to the battalion TF EPW collection point as quickly as possible. The ISG is responsible for their security and transportation. Guards remain with EPWs until released by the battalion S1. The exact procedure for evacuation will be according to battalion SOP.

## Section VIII. Health Service Support

TF health service support is planned by the medical platoon leader and S1 and is provided by the battalion medical platoon. Backup support is provided by the FSB medical company. To support TF operations, the medical platoon leader must understand the scheme of maneuver as well as the support plan of the FSB medical company.

### ORGANIZATION

The medical platoon is organized with a platoon headquarters, a treatment squad, four ambulance squads, and a combat medical section. This organization is designed to facilitate quick evacuation of wounded soldiers so that they can be treated by trained medical personnel within 30 minutes of the time they are wounded. The medical elements are organized as follows:

- The platoon headquarters contains the medical platoon leader and the platoon sergeant. They operate the CP and provide C3 for the medical platoon.
- The treatment squad contains the platoon leader (battalion surgeon), the physician's assistant (PA), and the treatment personnel. They can form one or two BASS capable of operating from, or forward of, the battalion combat trains using their organic M577s.
- The ambulance squads operate from the company trains and from the BAS. Tracked ambulances and crews habitually work with the same company, as do medics from the combat medical section. The senior combat medic acts as the squad leader for this ad hoc company medical team.

### OPERATIONS

**Maneuver Company.** Maneuver company medical support includes—

- Providing emergency triage and emergency medical treatment to sick and wounded personnel. Until patients are evacuated or returned to duty, protection is provided to prevent further injuries from artillery fragments and small arms by placing them inside armored ambulances or other protected enclosures.
- Assisting combat vehicle crews in evacuating injured crewmen from their vehicles.
- Providing medical evacuation for nonambulatory patients and assisting the evacuation of ambulatory patients, and providing evacuation means if the tactical situation permits.
- Initiating the field medical card for the sick and wounded and, time permitting, completing this card on deceased personnel.

- Screening, evaluating, and treating patients suffering from minor illnesses and injuries. Patients requiring no further attention are returned to duty; those requiring additional treatment are evacuated to the BAS.
- Remaining abreast of the tactical situation and complying with the instructions of the unit 1SG.
- Ensuring that the company commander and the battalion surgeon are informed of the status of patients seen and of the overall health status of the company.
- Training unit personnel to enable them to perform self-aid/buddy aid.
- Coordinating for anticipated logistics support for deployed team.
- Providing trained combat lifesavers.
- Ensuring that medical waste is properly handled and disposed.

**Battalion Aid Station (BAS).** The BAS provides the facility and the medically trained personnel to stabilize patients for further evacuation, to perform immediate lifesaving or limb-saving surgery, and to treat patients with minor wounds or illnesses and return them to duty. Additionally, the BAS can operate two treatment teams if the tactical situation requires it. Other functions of the BAS include—

- Receiving and recording patients.
- Notifying the S1 of all patients processed, giving identification and disposition of patients as directed by SOP.
- Preparing field medical cards, and verifying information on them.
- Requesting and monitoring aeromedical evacuation of patients.
- Monitoring personnel, when necessary, for radiological contamination prior to medical treatment.
- Decontaminating and treating chemical casualties.
- Monitoring the activities of medical platoon personnel attached to company teams.
- Disinfecting nonpotable water for consumption at battalion water resupply points.
- Treating patients with combat stress. These patients are comforted, given food and drink, observed for a short time, put to work assisting medical personnel, and later returned to duty.

**Medical Evacuation.** Medical evacuation is the process of moving patients from the point of injury or illness, through successive medical treatment facilities, to the appropriate facility for treatment, early return to duty, or evacuation out of the combat zone. Medical evacuation is the responsibility of the next higher level medical support; for example, the FSB medical company evacuates patients from the BAS or coordinates medical evacuation from corps resources. Patients are evacuated no farther to the rear than their condition requires. These considerations also apply:

- Medical evacuation within the TF is routinely accomplished by the medical ambulance squads. Medical evacuation outside the TF may be accomplished by ground evacuation or by a combination of ground and air ambulances.
- Aeromedical evacuation out of the TF sector is used as much as possible. Ground ambulances are used only for patients who cannot be evacuated by air. The specific mode of evacuation is determined by the patient's condition, aircraft availability, and tactical situation. The physician or PA treating the patient normally makes this determination.

**Medical Supply and Property Exchange.** The medical platoon maintains a two-day stock of medical supplies. To prevent unnecessary depletion of blankets, litters, splints, and the like, the receiving medical facility exchanges like property with the transferring agency. Medical property accompanying patients of allied nations is disposed of in accordance with STANAG 2128.

**Preventive Measures.** Combat casualties may not constitute the majority of hospital admissions. Experience in World War II, Korea, and Vietnam indicates that the vast majority were for disease and nonbattle injuries not directly attributable to enemy action. Commanders can reduce disease and nonbattle injury by emphasizing the following preventive measures:

- Unit and mess sanitation and personal hygiene.
- Battlefield safety.
- Combat dress identification.
- Water purification and control.
- Immunization programs.
- Venereal disease prevention.
- Heat and cold injury prevention.
- Proper work-rest cycles.
- Pest control.

**Company Health Service Functions.** The medical aid team attached to the company provides emergency medical aid and evacuation for the company. The team provides first aid for minor injuries and illnesses and emergency medical treatment to stabilize seriously wounded soldiers for transportation to the BAS. Medics advise the commander and assist company field sanitation teams in maintaining the health of the soldiers. The medics are under the control of the 1SG. They must know where the BAS is located and how to find their way there and back without assistance.

Casualties are sustained by combat lifesavers and platoon medics until they can be moved to a covered position for transfer to the company medics. The 1SG dispatches the armored ambulance to meet the vehicles with wounded aboard. If there are several casualties in each platoon, the platoons consolidate their wounded in one spot for treatment and evacuation. Based on reported severity of wounds, the 1SG requests air evacuation (for the most critically wounded) or assistance from the BAS. The company aidmen triage the wounded, stabilize them for transportation, and treat them for shock. If neither air evacuation nor assistance from the BAS is available, the most serious casualties are transported to the aid station by the company's armored ambulance. The commander must approve this because it will deprive the company team of most of its medical support. For the less seriously wounded, the 1SG arranges for evacuation to the BAS using any available vehicles.

Weapons and military equipment needed immediately by the company team will not be evacuated with the wounded. The wounded will keep their protective masks and any personal items.